UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB1997-0722

March 27, 1997

Dave Reilly
Federal Highway Administration
The Oregon Division
The Equitable Center, Suite 100
530 Center Street NE
Salem, Oregon 97301

RE: Conference Opinion for the Proposed Eddyville-Cline Hill Highway Project

Dear Mr. Reilly:

Attached is the National Marine Fisheries Service's (NMFS) Endangered Species Act (ESA) section 7 conference opinion (Opinion) for the proposed Eddyville-Cline Hill Highway Project. This action has been determined by the Federal Highway Administration and the Oregon Department of Transportation as "likely to adversely affect" and determined by the NMFS as not likely to jeopardize the continued existence of Oregon Coast coho salmon (*Oncorhynchus kisutch*) and Oregon Coast steelhead (*O. mykiss*). The effect determination was made by evaluating the environmental baseline (current aquatic habitat conditions) and predicting effects of actions on that baseline (see enclosed Opinion).

Although the NMFS expects some adverse effects to the environmental baseline from the action, the effects are expected to be minor because of project design and project timing. Additionally, mitigation in the form of land acquisition and fish habitat construction will beneficially affect elements of the environmental baseline.

Should Oregon Coast coho salmon or Oregon Coast steelhead become listed under the ESA, or should critical habitat be designated, the NMFS expects the attached conference opinion to serve as the basis for a biological opinion on implementation of the action, pursuant to 50 CFR §

402.10(d). Since the ESA does not have a prohibition against take of proposed or candidate species, an Incidental Take Statement is not issued with the attached conference opinion.

If you have any specific questions please contact Joanne Wu at (503) 230-5431 or Steve Morris at (503) 231-2224.

Sincerely,

William Stelle, Jr.
Regional Administrator

Enclosures

cc: Elton Chang, Federal Highway Administration
Candace Jochim, Oregon Department of Transportation
Ed Cantrell, Oregon Department of Transportation Region 2
Nicholas Testa, Oregon Department of Transportation
Pieter Dykman, Oregon Department of Transportation
Alan Lively, Oregon Department of Transportation
Randy Reeve, Oregon Department of Fish and Wildlif

Endangered Species Act - Section 7 Conference

CONFERENCE OPINION

Eddyville-Cline Hill Highway Project

Agency: Oregon Department of Transportation

Conference Conducted By: National Marine Fisheries Service
Northwest Region

Date Issued: March 27,1997

Refer to: OSB1997-0722

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I. Introduction and Background

The objective of this conference is to determine whether the proposed Eddyville-Cline Hill project is likely to jeopardize the continued existence of Oregon Coast (OC) coho salmon or Oregon Coast (OC) steelhead or result in the destruction or adverse modification of critical habitat. The OC coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU)[1] was proposed as threatened under the Endangered Species Act (ESA) (July 25, 1995, 60 FR 38011). The OC steelhead (*Oncorhynchus mykiss*) ESU[1] was proposed as threatened under the ESA (August 9, 1996, 61 FR 41541). A description of the proposed action is provided in Section II of this document.

The proposed action has been determined as "likely to adversely affect" OC coho salmon and OC steelhead. Although the National Marine Fisheries Service (NMFS) expects this action to adversely affect the environmental baseline, project design, timing, and mitigation reduce these effects substantially enough to avoid jeopardizing the continued existence of OC coho salmon and OC steelhead. Because critical habitat has not been proposed or designated, this conference does not address destruction or adverse modification of critical habitat. Should OC coho salmon or OC steelhead be listed under the Endangered Species Act (ESA), or should critical habitat be designated, the NMFS expects this Conference Opinion (Opinion) to serve as the basis for a biological opinion on implementation of this action, pursuant to 50 C.F.R. § 402.10(d).

A Biological Assessment (BA) describing the effects of the proposed action was submitted to NMFS on January 11, 1996. An addendum to this BA was received on January 31, 1997. Formal conferencing on the proposed action will be concluded with the issuance of this Opinion.

The NMFS, in collaboration with other Federal agencies[2], has prepared guidance for determining the effects of human

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1. For purposes of conservation under the Endangered Species Act, an Evolutionarily Significant Unit is a distinct population segment that is substantially reproductively isolated from other conspecific population units and represents an important component in the evolutionary legacy of the species (Waples 1991).

2. The other collaborating Federal agencies are the U. S. Forest Service, the Bureau of Land Management, and the U. S. Fish and Wildlife Service.

activities on anadromous fish species of concern (NMFS 1996). This guidance is based on a "Matrix of Pathways and Indicators" (Matrix), which is a simple yet holistic method of characterizing environmental baseline conditions and predicting the effects of human activities on those baseline conditions. The Matrix provides generalized ranges of functional values (i.e., properly functioning, at risk, and not properly functioning) for aquatic, riparian, and watershed parameters.

The NMFS acknowledges that the generalized values provided in the Matrix may not be appropriate for all watersheds within the range of anadromous salmonids. Development of more biologically appropriate matrices in specific physiographic areas is encouraged. The NMFS, in conjunction with the Oregon Department of Fish and Wildlife (ODFW) and Federal land management agencies, is in the process of appropriately modifying the Matrix for the Oregon Coast Range Province (this includes the proposed project area). For the purpose of this conference, the existing Oregon Coast Range Province interim Matrix (dated June 14, 1996) was used to analyze the proposed action. This interim Matrix is included in Attachment 1.

II. Proposed Action

The Federal Highway Administration (FHWA) proposes to fund the Oregon Department of Transportation (ODOT) in order to improve a 4.75-mile section of Highway 20. The purpose of the project is to (1) reduce the accident rate, which from 1985 to 1989 was 91 percent higher than the statewide rate for similar roadways during the same period (ODOT 1992); and (2) to improve the future service level of this part of Highway 20.

Highway 20 runs from Corvallis to Newport and serves as a major route linking Interstate Route 5 to Highway 101. The section proposed for improvement is in Lincoln County between the towns of Eddyville and Cline Hill. This section of highway generally follows Little Elk Creek, a tributary of the Yaquina River. The Yaquina River, which flows into the Pacific Ocean, lies within the Oregon Coast Range Province.

The proposed project would eliminate a number of sharp curves by realigning portions of the road. Travel lanes and shoulders would be widened. Road realignment activities include construction of:

- two retaining walls near Little Elk Creek;

- ten new bridges over Little Elk Creek;

- open-bottom culvert crossings Austin and Wakefield creeks (tributaries to Little Elk Creek); and

- culvert crossings for three unnamed tributaries to Little Elk Creek.

The ODOT has incorporated several project design features that substantially reduce adverse effects to anadromous fish. These features include:

- requiring bridges at all stream crossings of Little Elk Creek;

- replacing two culverts that block fish passage with open-bottom culverts;

- requiring a 20-foot setback between all project structures and Little Elk Creek;

- limiting in-water work to the dry season;

- planting disturbed areas with native tree species;

- acquiring approximately 10 acres of land which will be used for fish habitat enhancement structures and floodplain protection;

- conducting daily on-site monitoring during construction, including inspection of all erosion controls within 24 hours of one-half an inch of rainfall; and

- conducting yearly monitoring (for five years) of fish habitat structures and riparian plantings.

Full project details and project history are available in ODOT 1992, ODOT 1994, ODOT 1995a, ODOT 1995b, and FHWA and ODOT 1997.

The proposed project is designed to provide service for 20 years after completion. The FHWA is scheduled to approve funding for this project by July, 1997. Construction activities are scheduled to begin in spring of 1998.

III. Biological Information and Critical Habitat

The listing status and biological information for both OC coho salmon and OC steelhead is described in Attachment 1. While

critical habitat has not been proposed or designated, Attachment 1 describes potential critical habitat elements for OC coho salmon and OC steelhead.

IV. Evaluating the Proposed Action

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA, and defined in the implementing regulations (50 C.F.R. § 402). Attachment 2 describes how the NMFS applies
the ESA jeopardy standards. At this time, the NMFS is unable to determine whether actions included in this conference are likely to destroy or adversely modify designated critical habitat. This determination can be made at a later date when critical habitat is proposed or designated.

As described in Attachment 2, the first steps in applying the ESA jeopardy standards are to define the species' biological requirements and to describe the species' current status as reflected by the environmental baseline. In the next steps, the NMFS' jeopardy analysis considers how proposed actions are expected to directly and indirectly affect specific environmental factors that define properly functioning aquatic habitat essential for the survival and recovery of the species. This analysis is set within the dual context of the species' biological requirements and the existing conditions under the environmental baseline (defined in Attachment 1). The analysis takes into consideration the overall balance of beneficial and detrimental activities taking place within the action area. If the cumulative actions are found to jeopardize the listed species then the NMFS must identify any reasonable and prudent alternatives to the proposed action.

A. Biological Requirements. For this conference, the NMFS finds that the biological requirements of OC coho salmon and OC steelhead are best expressed in terms of environmental factors that define properly functioning freshwater aquatic habitat necessary for survival and recovery of the species. Individual environmental factors include water quality, habitat access, physical habitat elements, channel condition, and hydrology. Properly functioning watersheds, in which all of the individual factors

operate together to provide healthy aquatic ecosystems, are also necessary for the survival and recovery of OC coho salmon and OC steelhead. This information is summarized in Attachment 1.

B. Environmental Baseline.

1. **Current range-wide status of the species under the environmental baseline.** The OC coho salmon ESU, although not in immediate danger of extinction, may become endangered in the future if present trends continue (Weitkamp *et al*. 1995). The OC steelhead ESU, although not presently in danger of extinction, is likely to become endangered in the foreseeable future (Busby *et al*. 1996). In the absence of adequate population data, habitat condition provides a means of evaluating the status of these species for the environmental baseline assessment.

2. **Action Area**. The “action area” is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 C.F.R. § 402.02). Thus, the "action area" for this conference includes areas downstream of the project area as well as the immediate project area itself.

3. **Current status of the species under the environmental baseline within the action area.** Environmental baseline conditions within the action area were evaluated at the site and basin scale. This evaluation was based on the Oregon Coast Province interim Matrix (see Attachment 1). This method assesses the current condition of instream, riparian, and watershed factors that collectively provide properly functioning aquatic habitat essential for the survival and recovery of the species.

   The Yaquina River basin is “at risk” or “not properly functioning” for all but two of the seventeen environmental conditions considered. Environmental conditions in the Little Elk Creek watershed vary between all three functional levels, with the “at risk” category dominant (FHWA and ODOT 1997).

Based on the best information available on the current status of the species (Attachment 1) and the NMFS' assumptions given the information available regarding (1) population status, population trends, and genetics (page 3 of Attachment 2) and (2) the environmental baseline conditions within the action area, the NMFS concludes that the biological requirements of OC coho salmon and OC steelhead are currently not being met under the environmental baseline within the action area. Significant improvement in habitat conditions is needed to meet the biological requirements for survival and recovery of these species. Actions that do not maintain or restore properly functioning aquatic habitat conditions would be likely to jeopardize the continued existence of OC coho salmon and OC steelhead due to the high level of risk the species presently face under the degraded environmental baseline.

V. Analysis of Effects

A. Effects of Proposed Actions. The effect determination for the proposed project was made using NMFS (1996) to evaluate the environmental baseline (current aquatic conditions) and to predict any effects of the action on that baseline. The effects of the action are expressed in terms of the expected effect (restore, maintain, or degrade) on each of the aquatic habitat factors in the project area, as described in the "Checklist for documenting environmental baseline and effects of the action" (Checklist) completed for the action (ODOT 1997). The results of the Checklist for this action provide a basis for determining the overall effect on the environmental baseline in the project area.

The action is expected to maintain most of the aquatic habitat factors within the Little Elk Creek watershed. The habitat access factor will be restored to Austin and Wakefield creeks. Some short-term increases in sediment reaching the water may occur due to installation of fish habitat projects and to minor in-water construction. Habitat enhancement projects will probably reduce fine sediment in the long term, however. The road density and drainage network factor may be degraded by the action, according to a qualitative assessment. Floodplain connectivity may be degraded or unaffected by the action. The action is expected to maintain all habitat indicators in the Yaquina

River basin (FHWA and ODOT 1997).

Potential adverse effects of the project and mitigating factors are discussed below.

1. River crossings could encroach upon the stream and riparian area. However, the project design calls for ten bridges with 20-foot setbacks from the stream banks. This setback feature avoids entry into the river. The construction area will be revegetated using native species.

2. Increased access to the river could result in increased angling. However, the ODFW only permits angling for resident fish species in this area. Additionally, the new road will actually decrease the number of access roads to the river. There will be no pullouts constructed.

3. Increased sedimentation could result from (1) earth-moving activities, (2) placement of temporary support beams (called “false-work”) for construction of the bridges across Little Elk Creek, (3) placement of large woody debris for fish habitat, (4) construction of off-channel alcoves for fish, and (5) replacement of two culverts (at Wakefield and Austin creeks, tributaries to Little Elk Creek) with open-bottom culverts to allow fish passage. This work will be done during the ODFW work window with erosion control measures designed to prevent sediments from entering waterways. Any sediment increase would last for a short while. Expected benefits from the fish habitat enhancement include decreased fine sediment over the long term. All disturbed ground will be revegetated using native species including Douglas Fir, hemlock, and cedar trees.

4. The culvert crossings proposed for the three unnamed tributaries to Little Elk Creek will not be open-bottom culverts and could pose fish passage barriers. Sampling by the ODOT and the ODFW indicates that anadromous fish do not use these tributaries, however.

5. Erosion and landsliding could be caused by cuts needed for road relocation. Extensive geotechnical studies conducted on underlying soil stability indicate that these potential adverse effects have an extremely low probability of occurring (Nicholas Testa, ODOT biologist, personal communication, January 16, 1997).

6. A spill of hazardous materials at fuel storage sites and staging areas or during transport of fuel oil or asphalt could occur. The ODOT has standard spill prevention, control, and response plans in place.

7. Construction of the new road would increase the road density of the Little Elk Creek watershed. This increase is minimal: 4.75 miles will replace 4 miles, and 2 miles of the old road will be left to provide access to residences. The improved stability of the proposed road (see below) outweighs the increase in road miles.

8. Moving the road closer to the river could potentially decrease floodplain connectivity and could increase hydrologic scour, necessitating in-water repairs. The current road is undercut in several places by the creek. The new road, while closer to the creek in some places, would always be at least 20 feet away from the stream banks. The new road will be built to current engineering standards. These design features make hydrologic scour of the new road highly unlikely.

9. Maintenance activities could pose a risk to OC coho salmon and OC steelhead. These activities will be covered under a separate, programmatic conference between the ODOT and the NMFS. The BA for this programmatic conference will be similar in nature to the road maintenance BA provided by the ODOT on September 10, 1996, to the NMFS for consultation in the Umpqua River basin. The statewide BA is nearing completion and should be submitted to the NMFS by April 1997 (Rose Owens, ODOT biologist, personal communication January 16, 1997; Nicholas Testa, ODOT biologist, personal communication December

16, 1996, January 14, 1997, and January 21, 1997).

8. The proposed retaining walls will be located at least 20 feet away from the stream bank and do not pose a potential adverse effect to OC coho salmon or OC steelhead.

B. Cumulative Effects. "Cumulative effects" are defined as those effects of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation" (50 C.F.R. § 402.02).

Agricultural activities occur along a substantial length of Little Elk Creek. To date, the Oregon Department of Agriculture has not implemented a basin plan regulating these activities. Much of the land in the watershed is privately-owned forest land, which are subject to the Oregon Forest Practices Act.

Significant improvement in the reproductive success of OC coho salmon or OC steelhead is unlikely without changes in agricultural, forestry, and other practices affecting riparian areas. The NMFS is not aware of any future changes to existing State and private activities within the action area that would cause greater impacts to these species than presently occurs.

VI. Conclusion

The Eddyville-Cline Hill highway project, as described in the BA and BA Addendum (ODOT 1995a; FHWA and ODOT 1997), is not likely to jeopardize the continued existence of OC coho salmon or OC steelhead. The NMFS used the best available scientific and commercial data to apply its jeopardy analysis (Attachment 2) when analyzing the effects, including cumulative effects, of the proposed action on the biological requirements of the species relative to the environmental baseline.

In reaching this conclusion, the NMFS has determined that the likelihood of survival and recovery of OC coho salmon and OC steelhead can be increased by providing sufficient prespawning survival, egg-to-smolt survival, and upstream/downstream

migration survival rates through the protection of and restoration to properly functioning freshwater habitat within the Yaquina River basin.

The ODOT applied the NMFS' evaluation methodology (NMFS 1996) to the proposed action and found that the proposed action would cause minor, short-term degradation to some essential habitat elements. The action would improve other essential habitat elements, such as habitat access and long-term turbidity levels.

Project design features (such as bridge stream crossings, land acquisition for fish habitat enhancement, and twenty-foot setbacks for project structures) substantially diminish adverse effects to anadromous salmonids. These beneficial design features balance any short-term habitat degradation.

Because they are balanced by habitat improvements and beneficial design features, adverse habitat effects from the proposed action would not reduce prespawning survival, egg-to-smolt survival, or upstream/downstream migration survival rates to a level that would appreciably diminish the likelihood of survival and recovery of OC coho salmon and OC steelhead.

VII. Conservation Recommendations

Section 7 (a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information.

The ODOT has taken substantial measures to minimize and mitigate the effects of the proposed project (see section II of this Opinion). The following conservation recommendations are designed to assist the ODOT in implementing these measures:

1. Should monitoring indicate that excessive sediment is delivered to waterways (e. g., a 10% or greater increase in turbidity), the ODOT shall notify the NMFS. The NMFS may request reinitiation of this conference.

2. Prior to beginning construction activities, the ODOT shall meet with the contractor to review the aspects of project design that affect anadromous salmonids.

VIII.Reinitiation of Conference

Reinitiation of this conference is required: (1) if any action is modified in a way that causes an effect on the species that was not previously considered in the BA and in this Opinion; (2) new information or project monitoring reveals effects of the action that may affect the species in a way not previously considered; or (3) a new species is listed or critical habitat is designated that may be affected by the action (50 C.F.R. 402.16).
For example, the analysis included in this conference has been conducted at the project or site level. Future watershed or basin analyses may indicate that the existing environmental baseline is substantially different than indicated by this analysis. Reinitiation of this conference would be required for ongoing or continuing activities for which the environmental baseline is substantially different than originally assessed.

Additionally, the NMFS would consider the project to be significantly modified if any of the beneficial design features mentioned above (such as acquisition of land for fish habitat improvement) fail to occur. Such a modification would alter overall project effects to coho salmon and steelhead, and reinitiation of this conference would be required.

IX. References

Section 7(a)(2) of the ESA requires biological and conference opinions to be based on "the best scientific and commercial data available." This section identifies the information used in developing this Opinion in addition to the BAs and additional information requested by the NMFS and provided by the ODOT.

Busby, P.J., T.C. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-NWFSC-27. 261 pages.

Federal Highway Administration (FHWA) and Oregon Department of Transportaion (ODOT). 1997. Biological Assessment Addendum.

National Marine Fisheries Service. 1996. Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale. NMFS, Environmental and Technical Services Division, Habitat Conservation Branch, 525 NE Oregon Street, Portland, Oregon. 28 pages.

Oregon Department of Transportation (prepared by CH2M Hill). 1992. Environmental Assessment: Eddyville to Cline Hill Section of Corvallis-Newport Highway. Salem, Oregon. 68 pp + appendices. May.

Oregon Department of Transportation (ODOT) (prepared by CH2M Hill). 1994. Revised Environmental Assessment: Eddyville to Cline Hill Section of Corvallis-Newport Highway. Salem, Oregon. 47 pp. + appendices. May.

Oregon Department of Transportation (ODOT) (prepared by CH2M Hill). 1995a. Eddyville-Cline Hill Project Biological Assessment for Oregon Coastal Coho Salmon. Salem, Oregon. 14 pp. + appendices. December.

Oregon Department of Transportation (ODOT) (prepared by CH2M Hill). 1995b. Eddyville to Cline Hill Section of Corvallis-Newport Highway: Technical Memorandum of Alignment Refinements to the Eddyville-Cline Hill Improvement Project. 21 pp. March.

Weitkamp, L.A., T.C. Wainwright, G.J. Bryant, G.B. Milner, D.J. Teel, R.G. Kope, and R.S. Waples. 1995. Status review of coho salmon from Washington, Oregon and California. NOAA Technical Memorandum NMFS-NWFSC-24, Northwest Fisheries Science Center, Seattle, Washington. 258 pages.